URL: http://cxc.harvard.edu/ciao3.4/set_par.html
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AHELP for CIAO 3.4

set_par

Context: sherpa

Jump to: Description Examples Bugs See Also

Synopsis

Module function for setting model parameter values, etc.

Syntax

```
Integer_Type set_par(Struct_Type)
Integer_Type set_par(String_Type,String_Type,{Float_Type | String_Type})

Success/Error Return Values: 1/0

Arguments:

(1) A parameter information structure

or

(1) The parameter name

(2) The field to set

(3) The new value for that field
```

Description

The first form of this function assumes as input the parameter information structure output by get_par, e.g.

```
sherpa> GAUSS[g]
sherpa> foo = get_par("g.pos")
sherpa> print(foo)
name             =  g.pos
model            =  gauss1d
type             =  src
value            =  0
min              =  -3.40282e+38
max              =  3.40282e+38
delta            =  -1
units            =  NULL
frozen           =  0
linked           =  0
```

```
linkexpr         =  NULL
```

The second form of this function takes the arguments listed above; fields to set include:

Allowed set_par Arguments

Argument	Description
value	the parameter value (either a number, or a string filename)
min	the current (soft) lower bound on allowed parameter values
max	the current (soft) upper bound on allowed parameter values
delta	the initial step size for the parameter in fits (or −1 to use the default step size)
frozen	if 1, freeze the parameter's value; if 0, thaw it
thawed	if 1, thaw the parameter's value; if 0, freeze it

See the Sherpa command CREATE for more information.

Example 1

Get a parameter structure; change two fields; set back into Sherpa:

```
sherpa> GAUSS[g]
sherpa> foo = get_par("g.pos")
sherpa> print(foo)
name             =  g.pos
model            =  gauss1d
type             =  src
value            =  0
min              =  −3.40282e+38
max              =  3.40282e+38
delta            =  −1
units            =  NULL
frozen           =  0
linked           =  0
linkexpr         =  NULL
sherpa> foo.value = 15.5
sherpa> foo.min = 0.0
sherpa> () = set_par(foo)
sherpa> SHOW g
gauss1d[g]  (integrate: on)
    Param   Type      Value        Min        Max                Units
    -----   ----      -----        ---        ---                -----
 1   fwhm thawed         10 1.1755e−38 3.4028e+38
 2    pos thawed       15.5          0 3.4028e+38
 3   ampl thawed          1 −3.403e+38 3.4028e+38
```

Example 2

Change two parameter attributes directly:

```
sherpa> GAUSS[g]
sherpa> () = set_par("g.pos","value",15.5)
sherpa> () = set_par("g.pos","min",0.0)
sherpa> SHOW g
gauss1d[g]  (integrate: on)
```

```
    Param   Type      Value        Min        Max                Units
    -----   ----      -----        ---        ---                -----
 1   fwhm thawed         10 1.1755e-38 3.4028e+38
 2    pos thawed       15.5          0 3.4028e+38
 3   ampl thawed          1 -3.403e+38 3.4028e+38
```

Bugs

See the Sherpa bug pages online for an up−to−date listing of known bugs.

See Also

sherpa

autoest, background, create, create_model, createparamset, fit, freeze, get_defined_models, get_model_params, get_models, get_num_par, get_par, get_stackexpr, getx, gety, guess, instrument, integrate, is_paramset, jointmode, kernel, lineid, linkparam, mdl, modelexpr, modelstack, nestedmodel, noise, paramprompt, paramset, pileup, rename, run_fit, set_paramset, set_stackexpr, source, thaw, truncate, unlink

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